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ARMY AVIATION
RISK-MANAGEMENT
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Night accidents:

a look at the numbers

NVD rates headed in the wrong direction

A look at the numbers

In FY 96, Army aviation achieved the safest year on record. The numbers are good news, and we all can justifiably be proud of the achievement. If, however, we dig into the numbers a little, not ***all*** the news is good. The bad news is that, overall, our night rates are headed in the wrong direction.

The tables below compare the FY 95 and FY 96 rotary-wing statistics. (Note: "Night systems" are the Apache PNVS/TADS. The comparatively high night-system rate is due, in part, to the relatively low number of hours flown for the year. The Apache had only one more Class A accident in FY 96 than in FY 95.)

Our night rates are an indication that our night environment is a tough place in which to operate. They say we're doing tough, realistic training. They also say we still have a lot to learn. The positive side of this is that we're doing a lot of things right. We're flying a larger percentage of our total flying-hour program at night than ever before. We also fly aided almost three times the number of hours we fly unaided.

Unfortunately, at this point, it's looking like the numbers for FY 97 are going to be even higher than FY 96. But let's look beyond the numbers. What's causing these increases in our night accident rates?

As we look at the kinds of accidents we had in FY 96 and are continuing to have this year, the hazard of tree strikes is a consistent problem. Very often these tree strikes result from inadvertent drift while at a hover. The aircraft experiencing these kinds of accidents are most frequently the OH-58D and the AH-64. As we look at the missions these aircraft routinely conduct (e.g., target hand-off, weapons engagements), it's not surprising that aircrews tend to fixate on the tactical situation and lose situational awareness. Typical accident reports read like this:

"The aircraft drifted rearward from a 70-foot OGE hover during a target hand-off maneuver for readiness level progression training. The rearward drift was toward rising terrain and continued until the tail rotor struck a 50-foot-tall tree at approximately 20 feet agl."

Rotary-Wing Class A Flight Accidents*	FY 95	FY 96
■ Day	.50	.28
■ Night	2.02	2.77
Night unaided	1.27	0.00
Night aided	2.37	3.95
Night systems	6.39	11.27
Night goggles	1.46	2.39
Total	.86	.87

Rotary-Wing Class A-C Flight Accidents*	FY 95	FY 96
■ Day	7.59	7.69
■ Night	9.72	13.87
Night unaided	6.37	9.31
Night aided	11.28	15.80
Night systems	17.15	22.54
Night goggles	11.97	14.37
Total	8.09	9.14

*Rate per 100,000 flying hours

Aircrews conducting night operations that include tasks such as "Select a combat position," "Recommend a holding area," or firing position operations should include as a sub-element the need for good hover reference points. These reference points should be clearly discernible with the ANVIS or FLIR in order to help crews maintain situational awareness. Under some circumstances it may even be necessary to place a chem stick, beanbag light, heat pad, or other position marking device to aid crews in maintaining position. Attempting to hover over areas of poor contrast or definition is made worse when moon-illumination levels are very low or the moon angle is low on the horizon. It may also be necessary to keep a deliberate, almost mechanical scan going in order to avoid fixation during these demanding tasks.

Another key factor we're seeing in accident reports is crew-coordination failures. Typical findings include shortcomings in crew-coordination fundamentals such as crews directing assistance, announcing actions, and offering assistance. In more than 25 percent of all the Class A-C flight accidents for FY 96 and so far in FY 97, crew-coordination errors were specifically identified. In many of the other accidents, while not specifically identified, crew-coordination failures were present.

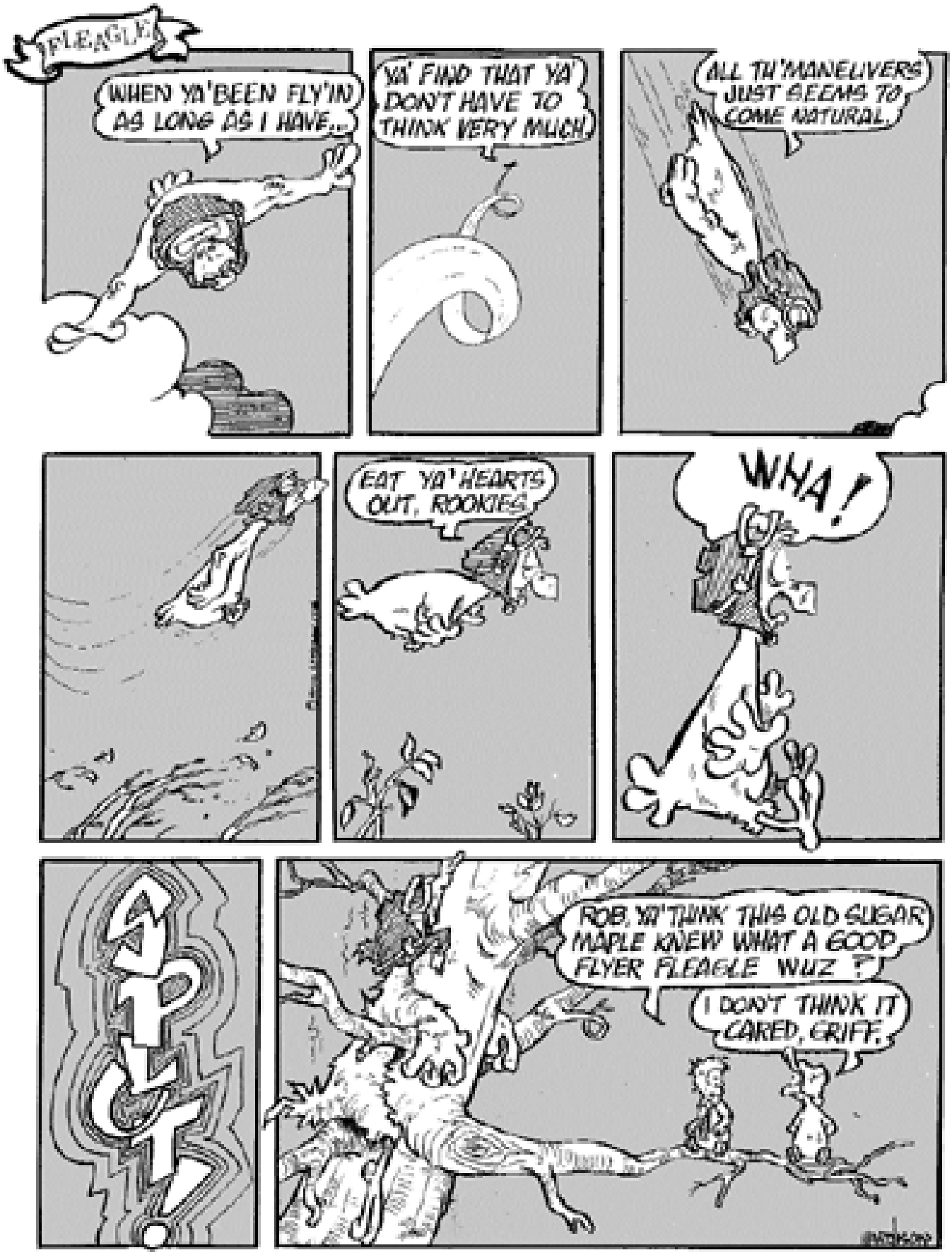
In many instances, aircrew awareness of a problem is enough to prevent similar accidents. In addition to awareness, though, aircrews should, during pre-mission planning, anticipate critical points of the mission and plan to ensure that someone will be looking outside to maintain aircraft control and remain situationally aware.

Also missing in some cases is detailed pre-mission planning on how teams or elements will function and coordinate actions. Actions in battle positions, firing positions, or holding areas should be developed into SOP items to ensure security, obstacle avoidance, and aircraft separation.

As usual, most of the FY 96 night-accident cause factors related to human performance. In many of the accidents, instructor pilots were conducting readiness-level progression training and became engrossed in training and evaluating and lost situational awareness. In some of these instances, pre-mission briefings on the specific critical tasks may have prevented both aviators from becoming fixated on tasks inside the aircraft.

This article is intended to increase awareness among aircrews so we can prevent night accidents. The suggestions here are just that. Aircrewmembers in the unit are the best source of information and ideas on how to prevent these kinds of accidents.

—CW5 Bob Brooks, Aviation Systems Section, USASC, DSN 558-2845 (334-255-2845)



Reprinted from *Tac Attack (Combat Edge)* courtesy of Stan Hardison

It's not just the new kid that's trimming trees with tail rotors. Senior stick wigglers and IPs are also showing up in accident reports. Heads up, folks!

Army safety web site

Update—we're growing our site

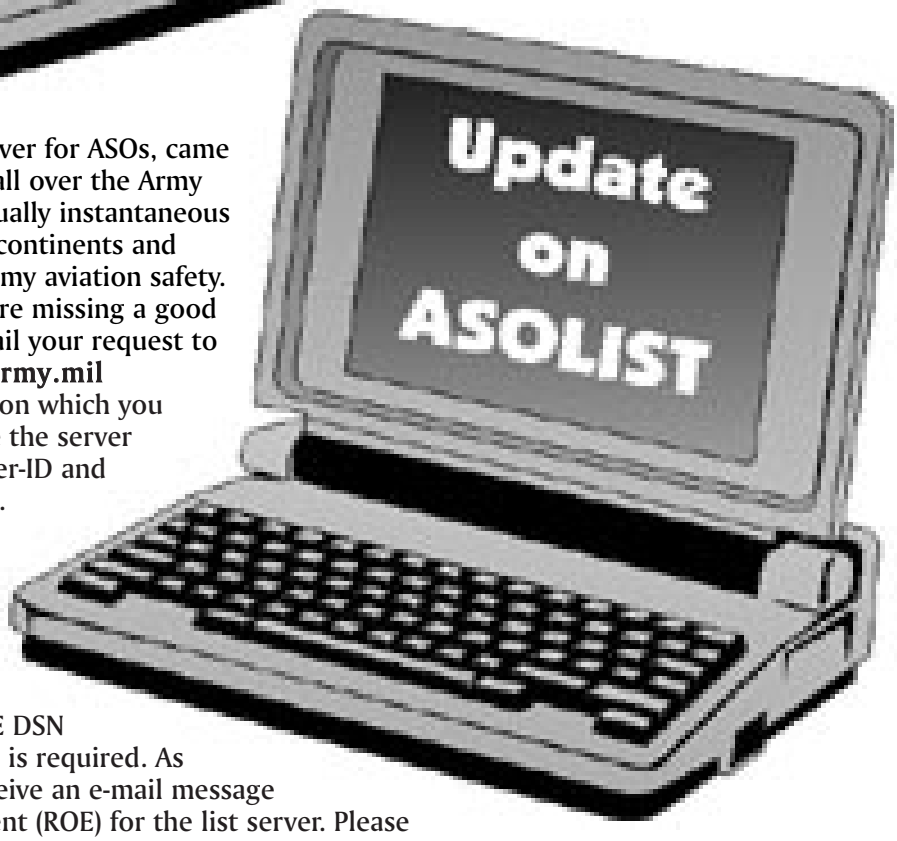
The Army Safety Center is working diligently to develop more effective and better communications with our customers. Much of our effort these days is being directed toward developing the Army Safety Web Site. We're pleased to report that it's growing bigger and better every day.

Our goal is to give you the ability to access the accident-prevention information you need to do your job safely. We want the Army Safety Web Site to be truly customer focused; the ultimate aim is to make it interactive to the point that you can, with a few clicks, tailor its products to your individual needs whether you're a general officer or a basic trainee. But that's down the road a bit.

We are, however, at the point where we need your input. We want to give you what you need in a format that you can use right now. We hope you'll take a look at what's there at the moment and give us some feedback on what you think. Hit our Webmaster with a note (webmaster@safety-emh1.army.mil), or send your comments to flightfax@safety-emh1.army.mil. We'll be tracking the site to see who's interested based on who's responding. Those results will determine in large measure what gets on and stays on the web today and in the future. Please take advantage of this opportunity to make our web site your own.

POC: Mr. John Hooks; Chief, Media & Marketing Division, USASC; DSN 558-3014 (334-255-3014)

The Army Safety Center has a new e-mail service for brigade-level commanders and MACOM safety officers. Through this service, we send these customers accident briefs and lessons learned from on-going Centralized Accident Investigations. This limited audience receives information as it develops, weeks before the formal accident report is completed. This directs useful accident-prevention information to the field immediately—and to the level at which corrective action can be taken immediately. Future plans are to expand the service to include all O6- and equivalent-level aviation decision makers, including program managers and PEO-Aviation. Customers in these categories can get on the list by calling USASC Operations, DSN 558-3410/2660 (334-255-3410/2660).



Last fall ASOLIST, a new list server for ASOs, came on line. More than 200 ASOs all over the Army have taken advantage of this virtually instantaneous way to talk to each other across continents and oceans on topics important to Army aviation safety. If you haven't yet signed on, you're missing a good deal. Signing on is easy. Just e-mail your request to **lstserv3@pentagon-hqdadss.army.mil** Be sure to use the e-mail system on which you want to receive ASOLIST, because the server will automatically detect your user-ID and e-mail address from your request.

The first line of your request must read: SUB ASOLIST YOUR NAME YOUR POSITION YOUR LOCATION DSN [or commercial phone number] (example: SUB ASOLIST JOHN SMITH ASO FT ANYWHERE STATE DSN 555-5555). No other information is required. As soon as you sign up, you will receive an e-mail message giving you the rules of engagement (ROE) for the list server. Please review these rules before sending a message to ASOLIST.

One reminder. In the simplest terms, ASOLIST automatically distributes messages to everyone on the list. So, although ASOLIST is a closed rather than a public list (not just anyone can subscribe), you should be sensitive to the information you transmit.

POC: CW4 Lee Helbig, USASC Training Development Branch, DSN 558-2443/2381 (334-255-2443/2381)

Wildfires: Stay away, stay alive

A basic primer on how to avoid wildfire areas

Wildfires have no respect. They'll burn anywhere, regardless of the airspace above them. We've had wildfires under Class B airspace at such places as Los Angeles and San Francisco. Wildfires also occur under Class G and E airspace. You would think that fires under E and G would present no threat to aviation, right?

Wrong. Not only is Class E and G airspace laced with military training routes for which the fires have absolutely no respect, but most air traffic in these areas is operating under visual flight rules. Some pilots flying out here get a false sense of security. They really don't have to talk to anyone and if they're low enough, they can't talk to anyone anyway.

Let's look at a possible wildfire incident. The incident is fictional but, trust me, it can happen this way.

MAJ Joe (honest, that is his first name) is our hero for the day. He is a competent aviator. He checked his aircraft, checked his weather and NOTAMs—he even filed a VFR flight plan. No mention was made in the NOTAMs of a wildfire near his route. Why? The fire has just been reported. It is spreading fast. The firefighting air cav is on the way. The air attack supervisor arriving on scene sizes up the fire and starts ordering aircraft. These range from light helicopters with water buckets to large air tankers. Then, he will most likely request a Temporary Flight Restriction (TFR) over the fire. This will be accomplished through the Air Route Traffic Control Center (ARTCC). He then calls the FAA in Washington, DC, and the TFR is entered into the computer. Now the TFR is a NOTAM—but it's too late; MAJ Joe is already airborne.

At this time, MAJ Joe notices a large column of smoke about 30 miles away, just north of his intended route. In his aircraft, 30 miles takes about 15 minutes. In that same 15 minutes, an OV-10 lead plane and five air tankers are converging on the scene. The air attack supervisor is now sequencing the tankers for their drops to attempt to build a retardant line around the fire. An OV-10 Bronco, with a C-130 close behind, is lining up for a retardant drop. Out of the smoke pops MAJ Joe. He just wanted to take a little look-see!

Breathe easy, boys and girls, there was no collision. Our hero did get a very rough ride from convection off the fire and C-130 wake turbulence. The rough ride doesn't end here. Depending on how he is dressed (civvies or nomex), MAJ Joe is going to receive a registered letter from the FAA mentioning something about an enforcement action or an invitation to stand in front of his commander.

How could our hero have avoided this nasty situation? Easy. If you see what appears to be a wildfire, from a safe distance note its location and call Flight Service. If it is a working fire, the FSS will notify you of the TFR. Then, all you have to do is avoid the area. If the fire has not yet been reported, Flight Service will report it for you. Then all you have to do is still avoid the area. In short, if you're near a wildfire and you aren't helping to put it out, you're in the way!

Stay away, stay alive.

For more information on TFRs, see FAR 91.137 and Advisory Circular 91-63B.

—CW4 (Ret.) Dave Kyle, Aviation Technical Specialist, Branch of Fire & Aviation Management, California State Office, Sacramento, CA, 916-979-2910

Gremlins lurking in the weather office?

It was mid July, and I was to fly an OH-58 out of a commercial airport in the Midwest. As I headed out to the ramp, I noticed the sky darkening far to the northwest. My weather brief was about 30 minutes old, so I decided to go back inside and get an update. I called Flight Service at 1700 and was told that an AIRMET had been issued for thunderstorms. The prediction was that these storms would not arrive at my location before 2200. The controller then added, "It may get there a little sooner than forecast, but you should have at least 2 to 3 hours."

As we took off at 1715, I looked to the northwest and saw black clouds. It was difficult to tell how far away they were, but they seemed a little closer than they had been at 1700. A few minutes later, my crew chief asked, "How far away does that storm look to you?" I looked around; it was definitely closer now. I replied, "Too close!"

The storm cloud was black, and we could now see that it was spitting lightning rapidly. The tower confirmed that it was headed toward the airfield from which we had just taken off and "closing rapidly." I notified the tower that we wished to land ASAP. At that point, we were 1 to 2 minutes from the airfield. I glanced at the clock; it was now 1737. It had been only 22 minutes since we took off.

What had happened to the forecast 5 hours and the assured minimum of 2 to 3 hours we would have before any foul weather appeared? As we approached our landing spot, we could see what looked to be horizontal tornadoes of dust spooling across the plowed fields to the northwest. We landed and dropped off our passenger without shutting down.

The storm had a forward-sloping leading edge, which, at a few thousand feet agl, had already passed over us by a couple of miles. We took off into the wind and built up airspeed and altitude before turning downwind and away from the approaching storm. We set maximum endurance airspeed power for possible turbulence penetration.

We continued flying out from underneath the upper leading edge of the storm for 3 or 4 minutes. There was only light turbulence and no rain or visibility restrictions. The leading edge seemed to be getting higher and higher above and further behind us and we were breaking out into clearer skies. I set cruise power. It looked as though we had outrun the storm and had a clear path back home.

Just then, we abruptly encountered turbulence that was as strong as any I have ever encountered in a helicopter. We were at about 1100 feet agl.

I reduced torque back down to that for maximum endurance airspeed for turbulence penetration and no less. The engine governor was already struggling with N2 upper excursions in this turbulence.

And then we were out of it. It was gone as suddenly as it had appeared.

It all turned out well, but what can we learn from this experience? The way I see it is that we pilots can get into enough trouble on our own without being lured into false security and poor decision making by inaccurate and incomplete weather information. It's a given that we cannot expect perfection in weather forecasting, but we should be able to expect a reasonable degree of accuracy on forecast weather. And we should expect ***very*** accurate, detailed, and complete reporting of ***current*** weather conditions.

Weather is a realm of constant, ongoing change and evolution. Forecasts are continually becoming present weather. Current weather is moving elsewhere—and usually evolving into something different as it moves along. What we can do to reduce the risks inherent in ever-fluctuating weather is to make the very most of new-generation Doppler radar and satellite coverage. It is, fortunately, becoming widely available at flight facilities across North America. This on-line weather service allows us to "visualize" weather. Its time-motion sequence enhancements and wide variety of other tools enable us to be as thorough as we wish to be in obtaining weather information.

We should be cautious and skeptical anytime we must receive a weather briefing solely by telephone or radio. In such cases, we should ask a lot of questions. If we have even the slightest doubt about the briefing, we shouldn't hesitate to call the nearest military weather office—even if it is some distance removed from our location. Our first choice should be to get a genuine "full-service" military weather briefing. If that's not possible, we should try to get input from more than one source. This is not "shopping for weather" if we remain suspicious and promote a mindset that the worst forecast is probably the most accurate.

—CW4 Don C. Thomson, Missouri ARNG, DSN 555-9330/9347 (573-526-9330/9347)

Change to ATM task

The OH-58D(I) community has experienced some mishaps in the past few months involving ATM Task 1053: Simulated Engine Failure at Altitude. These mishaps have resulted in Class E through Class B accidents, with damage ranging from overtorques to major damage. Indications are that crews training this task are failing to recover the throttle to full operating rpm before termination with power. The reasons for these failures may have resulted from failure to properly divide attention, incomplete cross checks, inadequate aircrew coordination, and/or inadequate written procedures.

In an effort to prevent further mishaps without reducing the training benefit of this task, the following modification to the ATM task description will be used by all aviators training OH-58D(I) simulated engine failures at altitude:

Before reaching 400 feet agl with the aircraft in a safe autorotative profile, the IP will begin smoothly advancing the throttle to full open and will state one of the two commands described below:

a. "Power recovery." Upon receiving this command, the P* will maintain trim with pedals and continue autorotative descent as the IP confirms normal operating rpm by throttle pressure and by visually checking that the Np rpm is at 100 percent. When operating rpm has been confirmed, the P* will apply sufficient collective to establish a normal climb. The P* will complete the recovery prior to reaching 200 feet agl.

b. "Terminate with power." Upon receiving this command, the P* will continue the autorotative descent. Before reaching 100 feet, the IP will confirm normal operating rpm with throttle pressure and visually check that the Np rpm is at 100 percent. The P* will trim the aircraft with the pedals and continue autorotative descent. During the....

The remaining text and the first two notes remain the same as written in the ATM. However, a third note should be added as follows:

Note 3: If time permits during the descent, the IP will announce "Throttle confirmed" when he is certain that the engine is back to operating rpm.

Additional training benefit is derived by having the IP control all throttle movements in that the student's attention is not divided between performing the simulated engine failure and throttle manipulation, which he normally would not do during an actual engine failure.

The simulated engine failure at altitude is an important training task. In the rare event of an actual engine failure, proficiency in this training task can be a lifesaver. Kiowa Warrior aviators must therefore continue to train, but train smart, applying established aircrew coordination fundamentals.

—adapted from Aviation Branch Chief Sends, subject: OH-58D(I) (Kiowa Warrior) Simulated Engine Failure Training Accidents, 142138Z Apr 97. Fort Rucker POCs: Mr. Ron Cox, Aviation Branch Safety Office, DSN 558-3000 (334-255-3000); CW4 John Sparkman, DES, DSN 558-2427 (334-255-2427)

MMS upper shroud security

As the OH-58D(I) system manager at the Army Safety Center, I have just received a Class B accident report involving the departure of an MMS upper shroud from the aircraft during flight. This makes number three. This latest incident resulted in three damaged blades as well as the loss of the $125,000 upper shroud itself.

Maintainers, you should take extra care when you're reinstalling the upper shroud after maintenance. Rumor in the field has it that the six captive bolts can be properly torqued even if they're not seated, resulting in a loose upper shroud. Therefore, you need to ensure that the shroud is seated and the captive bolts are properly installed before you torque them.

Pilots, during preflight you need to check—not just visually, but hands-on—the upper shroud for security.

The next revision to TM 55-1520-248-10 will contain an additional step in the preflight check in chapter 8. It will read "Check upper shroud for security."

And, hey, if you come up with a fix for the problem, please call me.

—CW5 Bill Ramsey, Aviation Section, Army Safety Center, DSN 558-2785 (334-255-2785)

Shortfax
Keeping you up to date

New fuel card coming

You will soon be seeing a new credit card for purchasing aviation fuel and related ground services. The AIR (Aviation Into-plane Reimbursement) Card will replace the U.S. Government National Credit Card (SF 149) and can also be used instead of the manually prepared SF 44, U.S. Government Invoice—Voucher. However, unlike the SF 149, each AIR Card will be embossed with the aircraft tail number and will stay with the aircraft when it is transferred to another unit. The tail number will be the link to billing data and other information in the AIR Card data base used to manage fuel purchasing.

AIR Card use will be implemented in stages. It will begin with testing in selected units to ensure that control and billing procedures are effective. At this time the AIR Card will be approved for use only at commercial facilities (Fixed Base Operators) that do not have Into-plane contracts. Identaplates will continue to be used at DOD airfields and at commercial locations with Into-plane contracts.

Once testing is completed, AIR Cards will be issued to all Army aircraft, and these cards will be used for all commercial transactions. The Identaplate will be retained for use at DOD airfields only. A long-range goal is to eventually replace the Identaplate with the AIR Card and give aviators a single card to use for all fuel purchases. However, this will not take place until airfields are equipped with appropriate card readers and data-collection systems.

Keep in mind that we have priorities for obtaining fuel for Army aircraft. By following them you can save fuel dollars and get more flying time.

First, use DOD facilities; you will be billed the stock fund standard price. For 1997, this is $.77 per gallon for JP8.

Second, plan your flights to take advantage of Into-plane contracts at commercial airfields; you will be billed the standard Into-plane price, which is $.99 for 1997.

Only if necessary should you stop at a commercial facility where you will have to pay posted price. An unstructured sample of commercial facilities showed an average price of just over $2.00 per gallon. It's easy to see the reason for our priorities.

POC: Phil Richards, Army Petroleum Center, New Cumberland, PA, DSN 977-7040 (717-770-7040), prichard@usapc-emh1.army.mil

Obsolete flak vests

Some soldiers are still being issued the obsolete 1960's era olive-drab nylon flak vest. This vest provides less than half the ballistic protection afforded by the Personnel Armor System Ground Troop (PASGT) vest (NSNs 8470-01-092-8498, -8499, -8500, and -8501). This is a critical soldier survivability issue.

The PASGT vest has greater capability than the old nylon vest to stop or slow fragments. It will reduce the number and severity of wounds from exploding conventional and improved conventional munitions. Estimates are that use of the PASGT vest in combat could reduce fragmentation-caused casualties by 18 to 51 percent, depending on the threat.

The PASGT vest is superior to the obsolete nylon vest not only in ballistic performance but also in terms of comfort and camouflage properties provided. Overall fit is greatly improved, and the vest is more flexible due to both the materials used and the vest design.

Commands should dispose of all obsolete olive-drab nylon flak vests. For the sake of soldier safety and survivability, only the PASGT vest should be used.

Black Hawk PMO moving

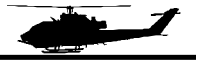
The Black Hawk Project Manager's Office is relocating from St. Louis to Redstone Arsenal, Alabama. A rear detachment will remain in St. Louis through 15 November, but business will be conducted from Redstone effective 18 August. Updated phone listings will be published in the July/August issue of the Black Hawk Newsletter.

—COL Tom Harrison; Project Manager, Utility Helicopters; DSN 693-1700 (314-263-1700)

Accident briefs

Information based on *preliminary* reports of aircraft accidents

AH1



Class D

F series

■ Postflight inspection revealed foreign-object damage. Damage included puncture of exterior skin material and significant dent in leading edge of one tail rotor blade.

Class E

F series

■ During approach, crew heard hydraulic pump cavitate, and master caution and No. 1 hydraulic pump segment lights came on. IP accelerated to 70 knots and initiated climbout. After coordination with ATC, IP executed running landing. Maintenance replaced ruptured hose and No. 1 hydraulic pump.

■ Master caution and engine chip lights came on while turning base. PI reset master caution and proceeded to land to grass strip. Observing rising rotor rpm and loss of N2 tach, he initiated overspeed emergency procedures, took manual control of throttle, and continued approach. IP took controls just prior to landing. Maintenance suspects failure of lock cup. Engine removed and sent to ATCOM for analysis.

■ Aircraft was at 20-foot hover during aerial gunnery training preparing to fire rockets. Upon reaching 10 knots, No. 2 hydraulic caution light came on. PC took controls, turned on emergency hydraulic pump switch, and landed. Maintenance replaced hydraulic solenoid cannon plug, correcting the problem.

AH64

Class E

A series

■ At 60 feet agl and 10 KIAS after takeoff from FARP, No. 1 engine failed at 88- to 90-percent torque. PC lowered collective and applied cyclic, and PI noted No. 2 engine torque reading 115 percent. Aircraft landed without further incident.

■ Crew reported failed day-sighting system during NOE flight. Postflight inspection revealed that TADDS day shroud (right side) was missing.

■ During training autorotation, crew heard loud pop and SDC light came on. Maneuver was terminated and aircraft was landed and shut down without further incident. Maintenance replaced SDC due to sheared shaft.

CH47

Class E

A series

■ During postflight, crew found that second cabin window on left side was missing. Suspect window blew out during practice smoke and fume elimination procedure.

D series

■ After engine start, No. 2 torque needle on both pilot and copilot torque indicators rotated clockwise continuously. Crew shut down engines. Torquemeter indicator was replaced.

■ During hover checks, as No. 1 AFCS was selected, aircraft started uncommanded left roll and vibrations were felt through the fuselage. Maintenance replaced No. 1 AFCS.

■ During normal cruise, maintenance panel indicated No. 1 flight control hydraulic pressure fluctuation from zero to 300 psi (normal is 2500-3200). Maintenance replaced No. 1 hydraulic pressure indicator.

■ Unusual noise and vibration were detected from forward transmission area during final approach, and hydraulic filter return light on maintenance panel came on. Caused by failure of No. 1 flight control hydraulic pump.

■ No. 1 engine transmission latch tripped on maintenance panel but not on segment panel. Caused by faulty wire on back of maintenance panel. After further inspection, latch was removed and replaced.

OH6

Class C

J series

■ Crew felt severe vibration as aircraft touched down. Postflight inspection revealed damage to both tail rotor blades and severed tail rotor drive shaft. Suspect damage occurred upon touchdown.

OH58

Class A

D series

■ Aircraft was one of flight of 10 conducting NVG NOE zone recon when tail rotor struck trees and separated from aircraft. Directional control was lost and aircraft crashed, killing the PC. Postcrash fire consumed the aircraft.

Class C

D series

■ Aircraft began to settle while in NOE movement to contact. PC applied torque to arrest descent, and engine torque went to 151 percent for 5 seconds.

Class D

C series

■ Aircraft was Chalk 3 in flight of four. During landing, downwash from Chalk 2 (an AH-1) caused Chalk 3 to rapidly descend from 10 feet agl to 5 feet. Pilot applied collective to prevent striking runway, resulting in overtorque of 110 percent for one second. Maintenance replaced K-flex drive shaft.

Class E

A series

■ Master caution and engine chip lights came on during hover. Aircraft was landed and shut down without further incident. Maintenance replaced engine.

D series

■ During rearming procedures for aerial gunnery, pilot receiving instruction inadvertently launched 2.75-inch folding fin aerial rocket. Rocket went over protective berm. No injuries or damage reported.

UH1

Class C

H series

■ Crew reported high-side governor failure while at a hover. Aircraft was autorotated to ground without further incident. Suspect engine overspeed/overtorque.

■ Tiedown chain had not been removed from skids, and aircraft plummeted to ground during takeoff to

hover. Main rotor blade contacted WSPS, resulting in 10-inch hole in one main rotor blade.

Class E

H series

■ At 50 feet agl, 50 KIAS, and climbing at 500 feet per minute, crew noted increase in aircraft noise accompanied by right yaw. Master caution, low rpm, and engine chip detector lights came on. Suspect N2 gearbox failure.

■ Aircraft was at engine idle after normal approach and landing when 90-degree gearbox chip detector was seen hanging by the safety wire. Aircraft was shut down, and maintenance replaced defective part and serviced gearbox. QDR was submitted.

■ Oil pressure fluctuated in cruise flight, and pilot made precautionary landing. Inspection revealed oil on the left side of fuselage, tail boom, and engine deck; engine oil reservoir was empty. Packing on engine chip detector had failed and oil had leaked out through the ODDS engine chip detector. Packing was replaced.

■ Master caution and hydraulic segment lights came on at 50-foot hover. Pilot felt significant feedback in cyclic and upward feedback in collective, and cockpit and cabin area filled with smoke. PC flew forward to regain airspeed and completed a run-on landing at airfield. Cause not reported.

UH60

Class B

A series

■ Upon setting down on helipad during landing, one engine experienced internal failure and exploded. Engine casing opened just aft of compressor and debris damaged cowling.

■ Lightning struck aircraft at 6000 feet agl. Aircraft landed without further incident.

Class E

A series

■ During cruise flight at 4000 feet msl, crew noted roaring sound accompanied by shudder vibrations and illumination of various caution lights and master caution light and audio. During emergency descent, left-hand input module chip light came on. Crew set engines to idle and main transmission oil light illuminated. Aircraft made power-on landing.

■ Aircraft was on last leg of ferry flight following complete overhaul. While in cruise flight, main transmission oil temperature began rising, maxing at 160° for 1 minute, and main transmission oil pressure dropped to 20 to 30 psi. No. 1 generator caution light came on during landing, and main transmission oil temperature overhead caution light came on during shutdown. Cause not reported.

L series

■ After completing rappelling exercise, aircraft landed to change rigging for STABO exercise. During rerigging, CE noticed fluid seeping from the ceiling on the left side, just to the right of the cargo restraint net ring at station 3080. Maintenance inspection revealed cracked hydraulic drain line downstream from manifold drain. Hydraulic drain tube was replaced.

C12

Class C

C series

■ Crew attempted to taxi aircraft with prop in feather, resulting in engine overtorque.

Class D

R series

■ Left wing struck blast fence while aircraft was being marshaled into parking.

Class E

D series

■ Aircraft was at about 9000 feet agl when white/blue smoke suddenly filled cockpit during 1.5-mile final approach. Caused by overheated forward vent motor.

■ No. 2 dc generator failed during climbout and would not reset. After leveling off, No. 1 dc generator also failed and would not reset. Caused by failure of starter generator.

F series

■ Right bleed air fail light came on during climbout. Aircraft returned to airport after holding for 40 minutes to ensure landing under 12,500 pounds. Maintenance determined that poly flow tubing melted near wing spar, causing bleed air light to illuminate.

■ Gear would not retract after takeoff. Maintenance replaced left-hand weight on gear switch.

C20

Class E

E series

■ CP windscreen outer layer imploded in flight, and crew made precautionary landing. Cause not reported.

F series

■ During taxi for takeoff and during before takeoff check, PI indicated that the flight hydraulic indicator was reading zero. After pulling off taxiway, FE's visual inspection confirmed that reservoir was empty.

C23

Class E

B series

■ During after takeoff checks on climbout, hydraulics-content gauge indicated in low-yellow caution range. Maintenance system pressure remained in normal area. Suspecting air in system or stuck hydraulic cylinder, maintenance personnel bled and reserviced entire hydraulics system.

■ FE noticed excess fuel on right side of aircraft after landing. Maintenance determined fuel was siphoning from aft fuel tank. Unlike the B series, the B+ has no check valve between the forward and aft fuel tanks. As a result, topping off can cause an overpressure situation on the aft tank because the forward tank sits higher, which can cause siphoning action that vents fuel.

O5

Class E

DHC-7

■ No. 1 engine would not start due to failure of starter generator.

■ No. 1 engine would not develop required torque during takeoff roll. Caused by failure of fuel control unit.

■ Nose wheel steering failed during taxi. Caused by failure of power-steering actuator.

■ After takeoff, altimeters began fluctuating +100 feet and IVSI +1000 feet per minute. Troubleshooting revealed water in static lines. Static system was purged.

For more information on selected accident briefs, call DSN 558-2785 (334-255-2785).

Aviation messages

Recap of selected aviation safety messages

Aviation safety-action messages

AH-1-97-ASAM-04, 221400Z May 97, maintenance mandatory.

This message revises AH-1-97-ASAM-02 and UH-1-97-ASAM-03 (211335Z Mar 97), which required replacement of aluminum high-pressure fuel fittings with stainless-steel fittings on all AH-1 and UH-1 helicopters. The purpose of this message is to provide additional task compliance time to preclude widespread grounding because of depletion of replacement parts. The level of risk has not increased by extending the compliance time. ATCOM contact: Mr. Robert Brock, DSN 693-1599 (314-263-1599).

CH-47-97-ASAM-09, 291851Z May 97, operational.

A Category I QDR has been submitted on the Sundstrand APU T-62T-2B. The APU compressor wheel failed during the startup sequence, separating into three equal sections that went through the APU air inlet housing. Two pieces were retrieved from the aft pylon. The third section appeared to have exited the aircraft. Investigation determined that fatigue cracks emanating from bolt holes on the back face of the APU compressor wheel caused the failure. The purpose of this message is to emphasize operational restrictions for the T-62T-2B APU and require reporting of APU serial number, time since new, and time since overhaul. ATCOM contact: Mr. Dave Scott, DSN 693-2045/2085 (314-263-2045/2085), scottd@stl.army.mil.

UH-1-97-ASAM-04, 221400Z May 97, maintenance mandatory.

See AH-1-97-ASAM-04 above.

UH-60-97-ASAM-13, 051517Z Jun 97, maintenance mandatory.

Spherical elastomeric assemblies procured under a spares contract initially did not include the sleeve bearing. Two instances of the elastomeric spindle bearing assembly being installed onto aircraft without the sleeve bearing have been found. Lack of the sleeve bearing will cause early failure of the assembly because of excessive play and direct contact of the bearing and spindle. The contract has been updated, and new bearing assemblies are now delivered with the sleeve bearing installed. The purpose of this message is to require a one-time inspection of main rotor spindle bearings, P/N SB7001-048, for missing teflon sleeve bearings, P/N SB5203-202. ATCOM contact: Mr. Dave Scott, DSN 693-2045/2085 (314-263-2045/2085), scottd@stl.army.mil.

Maintenance-information messages

AH-64A-MIM-97-04 281632Z Feb 97.

Some replacement shock strut mounts for AH-64A main landing gear do not have shoulder pins installed. These shoulder pins should be installed per procedures outlined in TM 1-1520-238-23, paragraph 2.77a. The purpose of this message is to outline modified inspection and maintenance procedures. ATCOM contact: Mr. Ken Muzzo, DSN 490-2257 (314-260-2257).

AH-64-MIM-97-05, 191031Z Mar 97.

The purpose of this message is to extend the life of AH-64 tail-rotor swashplate bearings (P/Ns 7-311527069 and 7-311527069-3) from 1000 to 1250 hours. The information in this MIM may be used to change the DA Form 2408-16: *Aircraft Component Historical Record* to reflect the new retirement life of these bearings. ATCOM contact: Mr. Ken Muzzo, DSN 490-2257 (314-260-2257).

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Class A Accidents through May

		Class A Flight Accidents		Army Military Fatalities	
		96	97	96	97
1ST QTR	October	1	0	0	0
	November	0	0	0	0
	December	0	1	0	0
2D QTR	January	1	2	0	2*
	February	0	0	0	0
	March	2	2	7	1
3D QTR	April	1	2	3	2
	May	0	1	0	1
	June	1		6	
4TH QTR	July	0		0	
	August	0		0	
	September	1		0	
	TOTAL	7	8	16	6

*Excludes 1 USAF pilot trainee fatality

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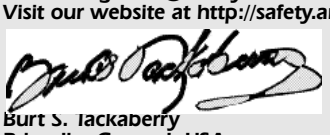

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